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Tapio, Jenni

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National Implementation of Non-Legally Binding Instruments: Managing Uncertainty in Space Law?

Jenni TAPIO^{*} & Alexander SOUCEK^{**}

Non-legally binding instruments are increasingly influencing the contemporary international approach towards the development of regulation of space activities. The example of space debris mitigation was – and remains – a prominent paradigm that has not only given way to a set of international non-legally binding guidelines and standards, but also reinforced the standing of ‘soft law’ as an alternative format for global norm setting. However, the successful development and proliferation of non-legally binding instruments for space debris mitigation is neither a proof, nor a guarantee, that such non-traditional approaches to norm setting can ultimately provide a necessary level of legal certainty in space law, as such an approach comes with challenges. Those are also relevant for the national implementation of the Guidelines on the Long-Term Sustainability of Outer Space Activities adopted in June 2019 by the United Nations Committee on the Peaceful Uses of Outer Space. This article discusses the levels of national implementation of non-legally binding instruments and their effectiveness in reaching the purpose and objectives of such instruments. In doing so, it shall shed light on the contribution of soft law and its national implementation to the development of space law at large.

1 INTRODUCTION

Non-legally binding instruments (commonly subsumed under the term ‘soft law’) have emerged in the regulation of space activities and, over time, gradually assumed an important role in space governance. The cluster of such instruments in the orbit of space law is large and heterogeneous.¹ But can such voluntary norms of behaviour effectively contribute to the development of space law – *and are they*

^{*} Ministry of Economic Affairs and Employment of Finland, and University of Helsinki, Finland. The views expressed in this article are made exclusively in personal capacity. Email: jenni.tapio@helsinki.fi.

^{**} European Space Agency (ESA), Paris, France, Noordwijk, The Netherlands. The views expressed in this article are made exclusively in personal capacity. Email: alexander.soucek@esa.int.

¹ For a more detailed discussion of the heterogeneity of ‘soft space law’, see Alexander Soucek & Jenni Tapio, *Normative References to Non-legally Binding Instruments in National Space Laws: A Risk-benefit Analysis in the Context of Domestic and Public International Law* in *Proceedings of the International Institute of Space Law 2018*, (forthcoming, Den Haag: Eleven International Publishing 2019) (hereinafter ‘Soucek, Tapio 2018’); For the purposes of this article, ‘soft law’ and ‘soft space law’ refer to non-legally binding instruments, which are not listed in the source catalogue of international law of Art. 38(1) of the Statute of the International Court of Justice (entered into force 24 Oct. 1945); for more detailed discussion on soft law in the context of space law, see e.g. various authors in Irmgard Marboe, *Soft Law in Outer Space: The Function of Non-binding Norms in International Space Law* (Wien: Böhlau Verlag 2012).

meant to do so? Consideration of this seemingly straightforward question gives rise to a host of new queries, most importantly: What are the parameters for measuring the effectiveness of non-legally binding norms of behaviour, and can those same parameters serve as the basis for the evaluation of the ‘success’ of soft law?

This article reflects upon the role and relevance of non-legally binding instruments in space law, looks at their effectiveness and discusses the quintessential role of national implementation as the entry gate to normative compliance. The authors suggest that such analysis is of particular relevance in relation to the recently adopted Guidelines for the Long-Term Sustainability of Outer Space Activities (‘LTS Guidelines’).² Heralded as a milestone achievement,³ they are a conglomerate of normative imperatives of very different depth and character, non-legally binding, yet established with the intention to steer behaviour towards a desired objective, i.e. sustainability of space activities. To reach all space actors successfully, those guidelines – like other non-legally binding instruments – need national implementation and compliance, once sufficiently concretised.

2 DEVELOPING SPACE LAW WITHOUT CREATING LAW: REFLECTIONS ON THE ROLE OF NON-LEGALLY BINDING INSTRUMENTS

Today, the United Nations (‘UN’) space treaties remain the primary legal source for guiding State behaviour in undertaking, or authorising and supervising, non-governmental space activities.⁴ They form the firm fundament of space law’s architecture. At the time of their creation, the UN space treaties were predominantly intended for managing Cold War realities against the then emerging context

² UN Committee on the Peaceful Uses of Outer Space, *Guidelines for the Long-term Sustainability of Outer Space Activities Working paper by the Chair of the Working Group on the Long-term Sustainability of Outer Space Activities*, A/AC.105/C.1/L.366; COPUOS, *Draft report*, Ch. II, Recommendations and decisions, para. 5., A/AC.105/L.318/Add.6.

³ United Nations Information Service, Press Release (UNIS/OS/518), 22 June 2019, *Guidelines for the Long-Term Sustainability of Outer Space Activities of the Committee on Peaceful Uses of Outer Space adopted* <http://www.unis.unvienna.org/unis/en/pressrels/2019/unisos518.html> (accessed 27 July 2019).

⁴ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies, entered into force 10 Oct. 1967; 610 UNTS 205 (hereinafter the ‘Outer Space Treaty’); Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, entered into force 3 Dec. 1968; 672 UNTS 119 (hereinafter the ‘Rescue and Return Agreement’); Convention on International Liability for Damage Caused by Space Objects, entered into force 1 Sept. 1972; 961 UNTS 187 (hereinafter the ‘Liability Convention’); Convention on Registration of Objects Launched into Outer Space, entered into force 15 Sept. 1976; 1023 UNTS 15 (hereinafter the ‘Registration Convention’); and Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, entered into force 11 July 1984; 1363 UNTS 3 (hereinafter the ‘Moon Agreement’); (together hereinafter referred to as the ‘UN space treaties’).

of spaceflight;⁵ this understanding remains paramount in their evaluation and interpretation. While a number of issues presently on the agenda of the UN Committee on the Peaceful Uses of Outer Space ('COPUOS') were not downright neglected in the 1960s, no clear normative standards and directions for such issues were set either.⁶ Some of these contemporary problems – such as the mitigation of space debris, the sustainability of space activities or the exploration, exploitation and utilisation of space resources – were, however, not at all, or only marginally, touched upon during the norm-setting exercise of the 'treaty era'.

Yet, this 'incompleteness' of the UN space treaties is no lacuna.⁷ None of them was intended to become the blueprint for a comprehensive spaceflight regulator's handbook. The Outer Space Treaty in particular is resulting from the realization that any legally binding instrument established at the very dawn of the space age should not attempt comprehensive codification of a future that was yet to be realized. The group of principles contained therein was meant to *reduce* uncertainty by leaving room for further development. The fragmentary character of international space law is thus, paradoxically, rooted in precaution: premature norm setting might have amplified uncertainty.⁸

Even though the UN space treaties were not meant to be comprehensive or exhaustive, they remained the only multilateral, legally binding instruments of this type. No further agreements of similar depth and character have been drawn up since the adoption of the last such treaty,⁹ the Moon Agreement, in 1979.¹⁰ Instead, non-legally binding instruments took over the role of advancing the development of space law. Those instruments have grown large in number and they are diverse in their character, content and addressees¹¹: from the five 'Principles resolutions'¹² to the annual UN General Assembly resolutions

⁵ See e.g. P. J. Blount, *Renovating Space: The Future of International Space Law*, Denver Journal of International Law and Policy Vol. 40, 515, especially 516–18, (2011).

⁶ Sustainability considerations in the UN space treaties, see e.g. Lotta Viikari, *The Environmental Element in Space Law, Assessing the Present and Charting the Future* 8–20, 117–47 (Rovaniemi: Lapin yliopisto-paino 2007); and more specifically on the environmental issues relating to launch phase, Steven Freeland & Donna Lawler, *Whose Mess Is It Anyway? Regulating the Environmental Consequences of Commercial Launch Activities*, in *Proceedings of the International Institute of Space Law 2011*, 318–26 (Corinne M. Jorgenson ed., Den Haag: Eleven International Publishing 2012).

⁷ The term 'incompleteness' is used here as a value-free diagnosis.

⁸ See e.g. Steven Freeland, *International Law and the Exploration and Use of Outer Space*, in *Risk and the Regulation of Uncertainty in International Law*, 80–81 (Monika Ambrus, Rosemary Rayfuse, & Wouter Werner eds, Oxford: Oxford University Press 2017).

⁹ UN General Assembly (hereinafter 'UNGA') Res A/RES/34/68 (5 Dec. 1979).

¹⁰ This is not to say that no further treaty law was developed in the context of space: legal instruments like the International Space Station (ISS) Intergovernmental Agreement (signed on 29 Jan. 1998), or any international agreements pertaining to space activities at large, can be counted in the group of 'space-related treaty law'; however, all those are not of the type and character of the UN space treaties.

¹¹ See Soucek, Tapio 2018.

¹² Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, UNGA Res A/RES/18/1962 (13 Dec. 1963); Principles Governing the Use by States of

endorsing the results of the preceding COPUOS session up to the trinity of the ‘Practice resolutions’,¹³ and, finally, to the so-called ‘Guidelines resolutions’¹⁴ which will be reflected in more detail in this article.

The heterogeneous group of non-legally binding instruments established under the auspices of the UN is supplemented by non-legally binding norms developed under various forums outside the UN context.¹⁵ Those instruments of largely ‘technical’ content – behavioural guidelines and space mission standards in particular – have played a distinctive role in recent years, especially in the fields of space debris mitigation, but also in planetary protection,¹⁶ and nuclear power sources safety.¹⁷ In this respect, the activities of the Inter-Agency Space Debris Coordination Committee (‘IADC’),¹⁸ the International Organisation for Standardization (‘ISO’),¹⁹ and the Committee on Space Research (‘COSPAR’) are recognized by the space community

Artificial Earth Satellites for International Direct Television Broadcasting, UNGA Res A/RES/37/92 (10 Dec. 1982); Principles Relating to Remote Sensing of the Earth from Outer Space, UNGA Res A/RES/41/65 (3 Dec. 1986); Principles Relevant to the Use of Nuclear Power Sources in Outer Space, UNGA Res A/RES/47/68 (14 Dec. 1992); Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries, UNGA Res A/RES/51/122 (13 Dec. 1996).

¹³ Recommendations on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space, UNGA Res A/RES/68/74 (11 Dec. 2013) (hereinafter the ‘National Space Law Resolution’); Application of the Concept of the ‘Launching State’, UNGA Res A/RES/59/115 (25 Jan. 2005) (hereinafter the ‘Launching State Resolution’); and Recommendations on Enhancing the Practice of States and International Intergovernmental Organizations in Registering Space Objects, UNGA Res A/RES/62/101 (10 Jan. 2008) (hereinafter the ‘Registration Practice Resolution’).

¹⁴ LTS Guidelines (adopted by COPUOS but still to become subject of a UNGA Resolution as of Aug. 2019); and the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, endorsed by the UNGA in 2007 as an annex to the International Cooperation in the Peaceful Uses of Outer Space, UNGA Res A/RES/62/217 (22 Dec. 2007) (hereinafter the ‘COPUOS Space Debris Mitigation Guidelines’).

¹⁵ As such, these institutions have a role in the current ‘multi-layered regulatory system’ within global governance of space activities, see for a detailed discussion on the role of ‘transgovernmental regulatory networks’ and accountability, Anne-Marie Slaughter, *Global Government Networks, Global Information Agencies, and Disaggregated Democracy*, 24(4) Michigan Journal of Internal Law, 1041–75 (2003).

¹⁶ COSPAR, planetary protection guidelines (currently approved version is of Mar. 2011) https://cosparhq.cnes.fr/sites/default/files/pppolicydecember_2017.pdf (accessed 25 July 2019), it should be noted that the planetary protection guidelines make a reference of being ‘guide to compliance with Article IX of the UN Space Treaty in that area’ p. 12, referencing UNOOSA, *Report of the Committee on the Peaceful Use of Outer Space, 60th Session, 2017, A/72/20*, United Nations, New York.

¹⁷ Safety Framework for Nuclear Power Source Applications in Outer Space, jointly published by COPUOS, Scientific and Technical Subcommittee, and the International Atomic Energy Agency, A/AC.105/934, 2009.

¹⁸ IADC is ‘an international forum of governmental bodies for the coordination of activities related to the issues of man-made and natural debris in space’, Foreword, IADC Space Debris Mitigation Guidelines, IADC-02-01, Revision 1, Sept. 2007 (hereinafter the ‘IADC Space Debris Mitigation Guidelines’); COPUOS Space Debris Mitigation Guidelines, thus forming part of the UN non-legally binding instruments, are largely based on the first edition of the IADC Space Debris Mitigation Guidelines of 2002.

¹⁹ ISO Standard 24113 ‘Space systems – Space debris mitigation requirements’, 2010 is a detailed technical standard relating to space debris mitigation (hereinafter the ‘ISO Space Debris Mitigation Requirements’).

overall. The guidelines and standards developed within these forums are designed to deal with technical, operational and mission planning aspects of space activities. The related parameters – e.g. to minimize orbital break-ups or to ensure the post-mission disposal of spacecraft – are based on objectives such as risk limitation, and sustainability of space activities. This is an important characterisation they share with recent national European space laws²⁰: in addition to the traditional risk limitation approach of States, they consider the safety and sustainability of space activities and the protection of the outer space environment to be values in themselves.

Prior to analysing the effects of non-legally binding instruments *in relation to* and *through* law, the root causes for their apparent success are to be reminded.²¹ The answer is partly based on the very nature of international space law. From the COPUOS mandate formulated in 1958, through the Legal Principles Declaration of 1963, and all the way to the Outer Space Treaty, international space law was never conceived as, nor intended to be, regulating space activities in a final manner; in fact, it was never construed to *regulate* them in the first place. The Outer Space Treaty was agreed based on the conviction that it would ‘further the purposes and principles of the Charter of the United Nations’.²² Accordingly, it was structured as a collection of twelve²³ high-level legal principles providing a quasi-constitutional backdrop for the conduct of States in the exploration and use of outer space. Among those, the common interest of all States in the exploration and use of outer space and the partial demilitarisation of outer space have been identified as the two ‘underlying motives for the conclusion of the Outer Space Treaty’.²⁴ With Article VI of the Outer Space Treaty providing the ‘entry gate’ to the national regulation of non-governmental space activities, the Outer Space Treaty assumes, and implies, supplementary State action to regulate space activities at two levels concomitantly: the international level and the national level.

At the international level, States gradually developed space law principles further through additional treaties.²⁵ As multilateral space treaty making eventually came to a standstill, further action gradually shifted to non-legally binding instruments: this was

²⁰ See e.g. the national space laws of Austria, Belgium, Denmark, Finland, France or Portugal, addressing issues relating to environmental protection of outer space especially with regard to implementing space debris mitigation procedures and/or environmental impact assessments of space activities, and in some instances the environment of the Earth and the atmosphere, too.

²¹ See Soucek, Tapio 2018.

²² The Outer Space Treaty, ninth preambular paragraph.

²³ Articles I–XII of the Outer Space Treaty contain ‘material’ provisions, while Articles XIII–XVII are treaty-technical articles, i.e. not establishing material but procedural content.

²⁴ Stephan Hobe & Niklas Hedman, *[The] Preamble*, in *Cologne Commentary on Space Law* vol. I, 24 (Stephan Hobe, Bernhard Schmidt-Tedd & Kai-Uwe Schrogl eds, Cologne: C. Heymanns 2009).

²⁵ These are in particular the four treaties following from – and substantiating – the Outer Space Treaty: The Return and Rescue Agreement, the Liability Convention, the Registration Convention and the Moon Agreement.

not a deliberate choice, but a consequence owed to circumstance. In this context, it is important to distinguish between non-legally binding instruments being a *supplement* versus being a *substitute*. With regard to the former, such UN General Assembly resolutions have accompanied space law making from the outset. They are process-immanent and necessary to prepare, accompany, specify, and thus supplement international legal norms established under the auspices of the UN.²⁶ On the other hand, the more recent trend of non-legally binding instruments intended to further develop the *corpus iuris spatialis* inside and outside the UN suggests having another quality: it substitutes legal norm-making, at least momentarily.

However, the inclusion of a behavioural norm in a non-legally binding instrument should not be interpreted as giving rise to a legal obligation for States, as recognized in the the LTS Guidelines ('nothing in the guidelines should constitute a revision, qualification or reinterpretation of the existing principles and norms of international law').²⁷ Nor should non-legally binding instruments be understood as interpreting the binding international normative framework, even though they may contribute to the formation of rules of customary international law in case the necessary requirements are fulfilled.²⁸ Nevertheless, non-legally binding instruments can reflect existing State practice and, by doing so, encourage a certain consistency for that practice to evolve. They can fill normative gaps by establishing voluntary guidelines or recommendations in fields where treaty law does not provide sufficient guidance, or no solution at all. They can provide for means of interpretation of treaty law, albeit within clear boundaries set by the object, purpose, procedure, and limit of treaty interpretation in public international law (which usually remains a prerogative of the parties); or they can treat 'lateral aspects' which are of indirect relevance to the regulation of space activities.

At the national level, States implement (at varying degrees) the principles and norms they committed to when becoming a State Party to the UN space treaties. This usual process forms part of the relationship between international law and domestic law: the transposition of a State's international obligations into national law.²⁹ That process is of particular importance in space law, since the majority of treaty obligations is not self-executing.³⁰ Article VI of the Outer Space Treaty

²⁶ The 1963 Principles Declaration, the annual UNGA Resolutions endorsing COPUOS reports or the so-called 'Practice Resolutions' are to be subsumed under this category.

²⁷ LTS Guidelines, Preamble, paras 14 and 15. Similar text can be found in the Launching State Resolution para. 4, the Registration Practice Resolution, para. 6, and the National Space Legislation Resolution para. 4.

²⁸ See e.g. Hugh Thirlway, *The Sources of International Law*, in *International Law*, 121–27 (2nd ed., Malcom D. Evans ed., Hampshire: Oxford University Press 2006).

²⁹ Such transformation can be achieved using different techniques, depending on the legal system's (constitutional) requirements.

³⁰ Verdross and Simma coined the term 'Ergänzungsbedürftigkeit' to describe the necessity of public international law being supplemented and actualised by domestic law: 'As any legal norm can only be

serves as the prime example: by requiring States to authorise and continuously supervise non-governmental space activities, it sets a directive that must be achieved through ‘adequate means’,³¹ including, but not necessarily confined to, legislative action at national level. Simultaneously, States have to respond to requirements and take action beyond the parameters prescribed by the UN space treaties. As pointed out before, space activities pose new challenges to the regulator repeatedly: another rationale for a dynamic development of regulation, including both legal and non-legally binding instruments.

While the establishment of national space laws³² is not directly mandated by the UN space treaties,³³ it follows a practical need in the wake of new non-governmental space actors, new space technologies and novel uses of outer space. At times when international norm making is – for different reasons – confined to the creation of norms of recommendatory nature, national law is a mechanism to give legal force to non-legally binding instruments.³⁴ Although legal force may seem to run counter to the purpose of a ‘voluntary’ instrument, it actually does not. Regardless of an international instrument being legally binding or ‘voluntary’³⁵ in nature, the authors usually expect the instrument to guide behaviour in a certain way, for it can be presumed that this was the underlying rationale of its establishment (unless the reason of its existence is merely to have carried out a diplomatic exercise).

The above shows that space law is of an inherently evolutionary character. The danger of fragmentation and, therefore, uncertainty for norm addressees, is not primarily a question of legally binding versus non-legally binding norms; it is rather a question of effectiveness.³⁶

realised through human behaviour, international law could not be put into effect if national legal orders did not provide organs for its execution.’ (translation from German by the authors) Alfred Verdross & Bruno Simma, *Universelles Völkerrecht: Theorie und Praxis*, 37 (re-print of the third edition of 1984, Berlin: Duncker & Humblot 2010).

³¹ Michael Gerhard, *Art. VI of the Outer Space Treaty*, in *Cologne Commentary on Space Law*, vol. I, 119 (Stephan Hobe, Bernhard Schmidt-Tedd & Kai-Uwe Schrogl eds, Cologne: Carl Heymanns 2009).

³² Especially with reference to European States, currently twelve out of twenty-two ESA Member States have a national space law (Norway, Sweden, Finland, Denmark, the Netherlands, Belgium, Luxembourg, France, Austria, the United Kingdom, Portugal, and Greece).

³³ Even if Art. VI of the Outer Space Treaty mandates States to authorise and supervise their national non-governmental space activities, it leaves them with a margin of discretion to organise the matter; see also the National Space Law Resolution.

³⁴ Some of the LTS Guidelines do not fall within the scope of ‘space activities’ under the national legislation, e.g. Guideline B.4.1, which addresses conjunction assessment providers not usually within the scope of application of a national space law. Also the national implementation of the UN Sustainable Development Goals mentioned in the Preamble para. 2 and Guideline A.2 will most likely be implemented in connection to a State’s other mechanisms aiming to achieve these objectives.

³⁵ The characterisation of ‘voluntary’, however, refers to the international, i.e. State, level – while a State, once (voluntarily) having decided to be committed may make the instrument binding within its sphere of jurisdictional influence.

³⁶ Certain attributes of the soft law instrument that may enable more consistent national implementation and ensure that compliance at international level can be better achieved may be suggested for the non-

3. ON THE QUESTION OF EFFECTIVENESS OF SOFT SPACE LAW: REDUCING UNCERTAINTY BY EFFECTIVELY STEERING BEHAVIOUR

The impact of soft law in international law-making has been discussed extensively also in relation to space activities³⁷ but arguably, the consequences of soft law in national space law-making and its effects on the development of space law at large have received lesser attention.³⁸ In order for a soft law instrument to yield its desired effects, further action is required. In this, non-legally binding instruments are no different from legally binding ones. Both are established to *steer behaviour*. The difference comes with their implementation, application and enforcement. While treaty law has a distinct advantage in terms of steering behaviour, soft law starts from the premise that States voluntarily take on what is established therein, and flow such desired behaviour down to normative addresses at the national level, that is: within their jurisdictional powers.³⁹

There is no guidance on the process or the contents of national implementation of non-legally binding instruments, nor is there universal understanding on the meaning of the term. What complicates the situation is the fact that, unlike for binding treaty provisions, national implementation of non-legally binding instruments is *voluntary* by nature. This leads to a double-sided uncertainty for any possible norm addressee: not only is it uncertain *how* the instrument is implemented but also *if* it is implemented at all. States have to first form the political will for implementation; after all, the success of any such instrument ultimately depends on State action. The effectiveness of the process transposing the underlying policy goals set out in the non-legally binding instrument is of decisive importance; this is

legally binding instruments to provide for a good basis for any further implementing activities. Such attributes enable the addressees to understand and implement the contents in the same way, which is necessary for their universal implementation and application. Some authors have suggested, see Christian Brünner & Georg Königsberger, 'Regulatory Impact Assessment' – *A Tool to Strengthen Soft Law Regulation*, in *Soft Law in Outer Space: The Function of Non-binding Norms in International Space Law*, 94–95 (Irmgard Marboe ed., Wien: Böhlau Verlag 2012).

³⁷ See e.g. Fabio Tronchetti, 'Hot' Issues and their handling in *Outer Space in Society, Politics and Law*, 619–37 (Christian Brünner & Alexander Soucek eds, Wien: Springer-Verlag 2011); various authors in Irmgard Marboe, *Soft Law in Outer Space: The Function of Non-binding Norms in International Space Law* (Wien: Böhlau Verlag 2012).

³⁸ National implementation and its consequences have been discussed e.g. in the area of environmental law, see e.g. David Victor, Kal Raustiala & Eugene B. Skolnikoff, *The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice* (Laxenburg: The MIT Press 1998); but also e.g. the Arctic: Ida Folkestad Soltvedt, *Soft Law, Solid Implementation? The Influence of Precision, Monitoring and Stakeholder Involvement on Norwegian Implementation of Arctic Council Recommendations*, 8 Arctic Rev. on L. & Pol. 73 (2017).

³⁹ It has however been suggested that 'hard law is not necessarily more effective in ensuring implementation than soft law.' Ida Folkestad Soltvedt, *Soft Law, Solid Implementation? The Influence of Precision, Monitoring and Stakeholder Involvement on Norwegian Implementation of Arctic Council Recommendations*, 8 Arctic Review on L. & Pol. 73, 94 (2017).

where ‘intent gets translated in action’.⁴⁰ What is the role of national implementation in this process? Can a non-legally binding instrument, and the activities following its adoption, reduce legal uncertainty in relation to normative behaviour? Can they effectively answer *what is required* by the behavioural imperative?

3.1 WHAT DOES ‘EFFECTIVENESS’ MEAN?

For the purpose of this article, the term ‘effectiveness’ describes the degree to which a non-legally binding instrument contributes to influence, i.e. steer, the behaviour of space actors.⁴¹ This would ultimately (and ideally) translate into ‘compliance’, although *compliant behaviour* is problematic to assess in relation to voluntary, often not sufficiently specified norms. Also, as it is difficult to assess compliance *ex ante*, the focus here lies on how States can implement a non-legally binding instrument at international and national level; the LTS Guidelines are a timely example.

Various degrees of intensity may be identified on the scale on which States can ‘implement’ soft law.⁴² For the purposes of this article, those include the following elements in ascending order, where (1) and (2) take place at international level and (3) and (4) at national level:

- (1) *recognition of the instrument and/or its objectives* (e.g. through references, expressions of support, advocacy or advertisement);
- (2) *engagement* (e.g. active contribution to the establishment of the instrument and to carrying its evolution forward);
- (3) *policy setting* (e.g. the implementation of national space policies in reaction or relation to the instrument); and
- (4) *legislative action* (i.e. the creation of, or insertion in, domestic law).

The above scale of intensity is not necessarily linear; national implementation in the form of policy or legal action ((3)/(4)) will undoubtedly influence identification and engagement ((1)/(2)), and as such, may impact the overall effectiveness of the instrument.

⁴⁰ David Victor, Kal Raustiala & Eugene B. Skolnikoff, *The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice*, 1 (Laxenburg: The MIT Press 1998).

⁴¹ This includes States, international intergovernmental organizations and non-governmental actors.

⁴² In this article, ‘national implementation’ is understood to mean not only legislative action (*iv above*) but to entail the entirety of activities that States and intergovernmental entities take based on a non-legally binding instrument. Taking any such activities requires informed decisions to further the objectives of the instrument in question.

3.2 THE 'EXTERNAL ELEMENT' OF NATIONAL IMPLEMENTATION

Any national implementation process is not to be viewed or undertaken in splendid isolation. Acts of domestic implementation, application and even enforcement may have repercussions at the international level and towards other State actors. They can contribute to, or have undesired effects on, the overall consistency in understanding, applying and developing a non-legally binding instrument.

Taking the example of the LTS Guidelines, (1) *recognition* may become manifest through statements made at COPUOS or other international multilateral forums; such statements may underline a State's support to enhancing the sustainability and safety of space activities. This is the 'lightest form' of national implementation, far from what one would usually consider as 'implementation' in the common legal sense.⁴³ With regard to the second element, (2) *engagement*, the more involved a State becomes in furthering the objectives of the instrument, the more it will engage in taking concrete actions. This could encompass 'leading by example', for example by actively taking part in the COPUOS working group on sustainability; in doing so, a State may share best practices with a view of influencing the further development of norms of responsible behaviour and encouraging other actors to take action, too. The difference between *recognition* and *engagement* here lies in the degree of intensity of the activities, and possibly, the purpose for which those are undertaken. Arguably, only at the engagement level will resources need to be invested in the resulting action. The 'cost'⁴⁴ of putting the instrument in action may influence a State's decision about the level of intensity it should go for – or even whether it should take action at all.

3.3 IMPLEMENTING SOFT LAW AT NATIONAL LEVEL: LEGAL AND PRACTICAL QUESTIONS

National implementation in the format of national instruments (policies and laws; *see (3)/(4) above*) is the mechanism to make a non-legally binding instrument applicable to a wider group than its original addressees: this means, most importantly, the rapidly growing group of non-governmental space actors. The consequence of national implementation following adoption of a non-legally binding instrument is recognized as a usual mechanism in 'soft space law'.⁴⁵ However, as

⁴³ Formal statements by States may contribute to the formation of a customary rule, though arguably the contents and specificity of the statements matter in such analysis.

⁴⁴ Cost is understood here to mean both monetary and political cost.

⁴⁵ This is evident from the National Space Legislation Resolution, the COPUOS Space Debris Mitigation Guidelines, as well as the establishment of the 'LTS implementation working group' for 'sharing experiences, practices and lessons learned from the voluntary national implementation' (A/AC.105/L.318/Add.6, para. 9 (b)).

much as national implementation is presupposed, there is usually no specification on the type of mechanism, the appropriate level of detail, method or instrument to be taken by the norm addressees. This does not come as a surprise, since a State may freely decide to opt-in or opt-out to certain provisions, elaborate them further or merely take the bare minimum content as a basis for national implementation and application – if it does so at all.⁴⁶

National implementation of non-legally binding instruments is thus a multi-faceted process with no set definition on form or content. It may entail legislative action ((4) *above*) and could even lead to legal enforcement – seemingly a contradictory effect for norms originally conceived as non-legally binding and voluntary. The characterisation of ‘voluntary’, however, refers to the international, i.e. State, level – while a State, once (voluntarily) having decided to be committed, may make the instrument binding within its sphere of jurisdictional influence.

As a ‘lighter form’ of implementation compared to the creation of law, the national implementation process may also take the form of policy-setting ((3) *above*), i.e. making the goals of the soft law instrument part of the State’s national policy. Even though non-governmental space actors may adopt such principles on a voluntary basis, their effective implementation ultimately depends on the exercise of State power; the LTS Guidelines are no exception. On the other hand, even the legislative action to implement non-legally binding instruments is a process that should not be reduced to merely a regulatory exercise.⁴⁷ The formulation of parameters of compliance necessitates wider approaches beyond the legal discipline in order to achieve the instrument’s underlying goals at large. In practice, policy setting ((3) *above*) and legislative action ((4) *above*) often form two sides of one coherent process.

At the level of legislative action ((4) *above*), the process of national implementation triggers the development of domestic law, often complemented by technical standards; the requisite parameters may be incorporated in laws or standards by using *the technique of normative referral*.⁴⁸ In this way, the non-legally binding

⁴⁶ See e.g. in relation to the COPUOS Space Debris Mitigation Guidelines: ‘It is also recognized that exceptions to the implementation of individual guidelines or elements thereof may be justified, for example, by the provisions of the United Nations treaties and principles on outer space.’ 3. Application, <http://www.unoosa.org/documents/pdf/spacelaw/sd/COPUOS-GuidelinesE.pdf> (accessed 2 July 2019).

⁴⁷ The process of national implementation can be seen as forming part of the ‘ex ante evaluation’ defined as: ‘Future oriented research into the expected effects and side-effects of potential new legislation following a structured and formalised procedure, leading to a written report. Such research includes a study of the possible effects and side-effects of alternatives, including the alternative of not regulating at all.’ Jonathan Verschuuren & Rob van Gestel, in *The Impact of Legislation: A Critical Analysis of Ex Ante Evaluation*, 5 (J. Verschuuren ed., Leiden: BRILL 2009).

⁴⁸ See more specifically on the legal issues relating to referencing non-legally binding instruments in national space laws, Soucek, Tapio, 2018; On 31 Dec. 2018 the COPUOS space debris compendium

instrument (i.e. the root norm or reference norm) becomes indirectly applicable. National authorities will rely on both the root norm and the referral norm to apply, and possibly enforce, requirements contained in a national space law, taking its substantive content from the external, non-legally binding instrument. This technique, which can be observed in several recent national space laws,⁴⁹ presents an opportunity: as the development of national standards requires resources not necessarily readily available in a given country, the development of substantive rules and appropriate mechanisms at multilateral level could increase the probability of *consistent concretisation* of soft law.

The effects of a non-legally binding instrument applied through national space law may have broader legal consequences. The instrument, although originally not meant to embody legal obligations, may be considered as setting standards of behaviour for non-governmental actors and could, as such, be taken into consideration by a national court.⁵⁰ For this reason, a national space law referring to international non-legally binding instruments ('having regard to') will have an elevated requirement of continuous review and monitoring to ensure that the evolving 'soft' baseline is correctly reflected in the national instrument, and in its application. Such continuous review is certainly relevant in relation to *any* international commitments and their evolving interpretation; however, the very appeal of a non-legally binding instrument as a flexible tool makes this a more difficult task, requiring resources that may lie beyond usual means and practices at national level.⁵¹

In the absence of specific international guidance, it is therefore left to the national legislator – provided that a State opts for the legislative route – to concretise the parameters and requirements of a soft law instrument and to decide if and how to eventually elevate the non-legally binding content to the level of law.

included reference to twenty-seven national and six international mechanisms on space debris mitigation, UN Office for Outer Space Affairs ('UN OOSA') Annual Report 2018, 57 (Wien: United Nations 2018).

⁴⁹ See e.g. European national space laws; Austria: § 5 of the Austrian Outer Space Act Federal Law on the Authorization of Space Activities and the Establishment of a National Registry (Outer Space Act), BGBl. I No. 132/2011 'The operator has to make provision for the mitigation of space debris in accordance with the state of the art and in due consideration of the internationally recognised guidelines for the mitigation of space debris. Especially measures limiting debris released during normal operations have to be taken'; Finland: s. 10 of the Act on Space Activities (63/2018) 'In accordance with generally accepted international guidelines, the operator shall seek to ensure that the space activities do not generate space debris. In particular, the operator shall restrict the generation of space debris during the normal operations of the space object, reduce the risks of in-orbit break-ups and in-orbit collisions and, after the space object has completed its mission, seek to move it into a less used orbit or into the atmosphere'; Portugal: Decree-Law no. 16/2019 of 22 Jan., s. II, Article 7.1(c) 'The license is granted if the Space Authority is satisfied that: ... The space operation ensures the minimization of space debris as much as possible, in accordance with international principles and commitments.'

⁵⁰ That is if a court was prompted with a case concerning State's right to recourse under operator's fault liability for damage.

⁵¹ Soucek, Tapio, 2018.

Such decision will have to be made according to domestic requirements, considering the frame and limits set by constitutional and administrative law.⁵² The risk of this route, however, is that it can lead to diverging ‘rules of the road’ for inherently global space activities. In the absence of binding guidance and uniform understanding, it becomes indispensable for States to coordinate internationally and share information about their acts of national implementation. The importance of sharing experiences on the national implementation process of the LTS Guidelines was recognized by COPUOS early on as a decisive element in breathing life into the guidelines, and evidencing their importance for space activities.⁵³ Both the domestic practice and the external dimension of national implementation are therefore mileposts on the road to custom.

Currently, such sharing of best practices is being carried out at the level of COPUOS through statements under the various relating agenda items,⁵⁴ by submitting additional information in writing,⁵⁵ or adding information in ‘compendia’⁵⁶ on adoption of national policies or legislation. What might be an ‘upgrade’ in the process for the LTS Guidelines is to agree on an enhanced format for information sharing in order to draw meaningful conclusions on commonalities as well as diverging practices at national level.

The measures taken by COPUOS with regard to the LTS Guidelines have led to such an ‘upgrade’ practically from the outset – the inception of an ‘implementation

⁵² Any examination of the relationship between national law and international law starts from the constitution of the State, Eileen Denza, *The Relationship Between International and National Law*, in *International Law*, 428 (2nd ed., Malcolm D. Evans ed., Hampshire: Oxford University Press 2006).

⁵³ UN GA, *Report of the COPUOS Sixty-first session*, A/73/20, para. 203: ‘The Committee encouraged States and international intergovernmental organizations to consider implementing guidelines for the long-term sustainability of outer space activities on a voluntary basis, and to share their experiences with implementation under the Subcommittee’s agenda item on the long-term sustainability of outer space activities.’

⁵⁴ See currently e.g. COPUOS, Scientific and Technical Subcommittee agenda item 7 – Space debris; COPUOS Legal Subcommittee agenda item 10 – General Exchange of Information and Views on Legal Mechanisms Relating to Space Debris Mitigation and Remediation Measures, Taking into Account the Work of the Scientific and Technical Subcommittee; COPUOS Main Committee agenda item 8 – Space and sustainable development.

⁵⁵ See e.g. UN OOSA, *Note by the Secretariat*, A/AC.105/C.1/115/Add.1 (23 Nov. 2018), *Research on space debris, safety of space objects with nuclear power sources on board and problems relating to their collision with space debris* (agenda item 7, Scientific and Technical Subcommittee); Member States are invited to provide reports on research on space debris; the safety of space objects with nuclear power sources on board; problems relating to the collision of such space objects with space debris; information on practices that had proved effective in minimizing the creation of space debris; and ways in which debris mitigation guidelines are being implemented (A/AC.105/1202, para. 143).

⁵⁶ For example, the UN OOSA, *The Space Debris Mitigation Standards Adopted by States and International Organizations* published under COPUOS, http://www.unoosa.org/documents/pdf/spacelaw/sd/Space_Debris_Compendium_COPUOS_25_Feb_2019p.pdf (accessed 6 July 2019); and Compendium on mechanisms adopted in relation to non-legally binding United Nations instruments on outer space published under COPUOS http://www.unoosa.org/documents/pdf/spacelaw/Non-legallyb_mech/COMPENDIUM_Updated_31_March_2017.pdf (accessed 29 July 2019).

working group’.⁵⁷ This differs from previous practice, for example in relation to the space debris mitigation guidelines. The setting up of a working group to oversee the development of the LTS Guidelines is important on its own for the purposes of development of space law. It will be equally important to agree on a set of requirements for the information submitted to it, in order to be able to efficiently monitor the effectiveness of (national) implementation.

4. FROM SPACE DEBRIS MITIGATION TO THE LONG-TERM SUSTAINABILITY OF SPACE ACTIVITIES: DIFFERENT LEVELS OF EFFECTIVENESS

As described before, the ‘era of guidelines’ generated substantial soft law instruments both under the auspices of the UN and outside, including the space debris mitigation guidelines and standards (‘SDM Guidelines’)⁵⁸ and the LTS Guidelines.⁵⁹

From the perspective of effectiveness, the SDM Guidelines can be cautiously qualified as a success. First, although there are several of them created under different contexts and in different forums, they show a certain degree of material coherence (even though they are *not* identical).⁶⁰ Second, they propose concrete, technical measures to a concrete, technical problem recognized by virtually all space-faring actors as an issue requiring immediate action. In parallel, they are perceived and accepted by States as enabling more effective regulation in this regard: they are seen as a beneficial tool. Third, they are, over large parts, specific enough to be implemented ‘as is’ and thus do not require widespread interpretation. Fourth, and most significantly, many States have already implemented them at domestic level through legislative acts, thereby elevating such guidelines from mere voluntary recommendations to the level of law, often by means of unspecific normative reference (a technique that may be problematic, however).⁶¹

Owed to the momentum created by the SDM Guidelines, efforts both at the international and national level have led to the development of clear and verifiable requirements as well as technical means to better monitor on-orbit space activities.⁶² Methods of verifying an operator’s compliance with the guidelines

⁵⁷ The mandate and scope of activities of the working group, COPUOS, *Draft report*, A/AC.105/L.318/Add.6, Ch. II, Recommendations and decisions, especially para. 9.

⁵⁸ The IADC Space Debris Mitigation Guidelines, the ISO Space Debris Mitigation Requirements, and the COPUOS Space Debris Mitigation Guidelines are together hereinafter referred to as the ‘SDM Guidelines’.

⁵⁹ The notion of ‘long-term sustainability’ seems tautological, as ‘sustainability’ must necessarily be *long-term*.

⁶⁰ Soucek, Tapio 2018.

⁶¹ *Ibid.*

⁶² One recent approach is an international, transdisciplinary effort to develop a Space Sustainability Rating (SSR), a technical metric monitoring compliance of an individual satellite’s performance against the space mitigation requirements.

during a given space mission are discussed by ways of international cooperation and information sharing, too. Those effects underline the potential of non-legally binding guidelines; but they are, at the same time, a reminder that any of them needs to be channelled through the right normative or practical mechanism to really yield the desired results.

In direct comparison with the SDM Guidelines, the LTS Guidelines are of a different character. While they are also *material* in the sense that they contain norms of behaviour and *substantively novel* in the sense that they introduce new substantive content, they are *internationally negotiated* in the sense that they are the result of a consensus-making process; they are *political* in the sense that they go beyond mere technical recommendations or a summary of State practice; and they are *heterogeneous* in the sense that they institute a wide-ranging catalogue of norms of very different character, depth, detail and specificity. In other words, the LTS Guidelines intend to steer different behaviours, at different levels.⁶³ Several of the guidelines do not even address space activities *per se* but ‘lateral’ activities that may have to do, in one way or another, with space activities in the more narrow sense employed in the UN space treaties (and which are thus directly addressed by the *corpus iuris spatialis*). The following three examples illustrate⁶⁴ this ‘normative heterogeneity’:

- (1) Guideline A.1 Adopt, revise and amend, as necessary, national regulatory frameworks for outer space activities: a guideline that steers States towards taking regulatory, including legislative action, while they ‘should bear in mind their obligations under Article VI of the Outer Space Treaty’;⁶⁵
- (2) Guideline B.4 Perform conjunction assessment during all orbital phases of controlled flight: a guideline that steers States and international intergovernmental organizations inter alia to ‘encourage’ spacecraft operators ‘through national mechanisms and/or international cooperation’ to perform conjunction assessments for all spacecraft capable of adjusting trajectories during orbital phases of controlled flight;

⁶³ Such diagnosis is confirmed by the introductory remarks to the LTS Guidelines: ‘The objective of ensuring and enhancing the long-term sustainability of outer space activities, as understood at the international level and as set out in the guidelines, entails the need to identify the general context of, and modalities for, continuous improvements in the way that States and international intergovernmental organizations, while developing, planning and executing their space activities, remain committed to the use of outer space for peaceful purposes, so as to ensure that the outer space environment is preserved for current and future generations.’ (A/AC.105/2018/CRP.20; para. 6, p. 2).

⁶⁴ Emphasis added by the authors is to underline the different core content of the three examples.

⁶⁵ It has been suggested that ‘responsibility’ is a precondition to ‘sustainability’; for discussion on the meaning of ‘responsibility’, see Wolfgang Rathgeber, *The General Concepts of Fairness and responsibility in The Fair and Responsible Use of Space, An International Perspective*, 6 (Wolfgang Rathgeber, Kai-Uwe Schrogl & Ray A. Williamson eds, Wien: Springer 2010).

- (3) Guideline C.4 Raise awareness of space activities: a guideline that steers, in fairly broad terms, States and international intergovernmental organizations to raise 'general public awareness of the important societal benefits of space activities'.

It is evident from the above excerpts that the LTS Guidelines cannot be implemented in the same way the SDM Guidelines were taken up in several national space acts, *i.e.* by generic, unspecific reference. An obligation *à la* 'the operator shall make provision for the long-term sustainability of outer space activities in accordance with the state of the art and in due consideration of the LTS Guidelines' is thus unlikely to be found in future national space laws; and if so, it may prove to be problematic. In light of the political scope and thematic span of the LTS catalogue, such generic reference would not be useful from the perspective of effectiveness. It is equally evident that much of the LTS Guidelines' content is not even suitable for implementation through national legislative action; in fact, as much as the LTS Guidelines themselves are heterogeneous, their implementation will require different types of State action, and at the appropriate level.

This relates directly to their prospect of effectiveness. The importance of nationally implementing the LTS Guidelines was underlined at the occasion of their adoption in June 2019.⁶⁶ Concomitantly, COPUOS established a working group under its Scientific and Technical Subcommittee, designated *inter alia* to be a tool to enable dialogue within COPUOS on possible further work under this umbrella⁶⁷ and to be a mechanism for 'sharing experiences, practices and lessons learned from the voluntary national implementation'.⁶⁸ In doing so, COPUOS affirmed that there is no single recipe on *how* to implement non-legally binding instruments and equally no conclusion which (legislative or other) method would

⁶⁶ A/AC.105/L.318/Add.4, paras 6, 9, 15 and 16–20.

⁶⁷ Reference to the remaining seven guidelines, not adopted as part of the compendium is included within the further work, 'Identifying and studying challenges and considering possible new guidelines for the long-term sustainability of outer space activities. This can be done by taking into consideration existing documents, including, *inter alia*, A/AC.105/C.1/L.367 and A/AC.105/2019.CRP.16.'; such a management mechanism may be referred to as 'system for implementation review (SIR)', *see* David Victor, Kal Raustiala & Eugene B. Skolnikoff, *The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice*, 47–56 (Laxenburg: The MIT Press 1998). The extent of the steering function of the LTS working group is yet to be materialised as the exact terms of reference and methods of work for the 'LTS implementation working group' are thus far to be established.

⁶⁸ On the establishment of the working group, *see* COPUOS, *Draft report*, A/AC.105/L.318/Add.6, Ch. II, Recommendations and decisions, paras 4c), and 7–10, encapsulating the non-paper by the Chair of the Informal Consultations on LTS, South Africa Draft report language for consideration by delegations (as of 5:00 PM on 19 June) <http://www.unoosa.org/documents/pdf/copuos/2019/V1904997.pdf> (accessed 26 June 2019).

be best suited in this respect.⁶⁹ Arguably, there is also no one interpretation on *what* specifically the content to be implemented eventually is, or should be. States have to rely on their own interpretation of these guidelines, not least due to the lack of common universal language, particularly in the context of the long-term sustainability of outer space activities.⁷⁰ Some States started to report on their implementation of some of the guidelines even before the package of twenty-one guidelines and their preamble had been adopted at COPUOS.⁷¹

The absence of legally defined terminology and uniform guidance for implementation is owed to both the nature of the LTS Guidelines and the process of their establishment: they are the product of long-lasting multilateral negotiations and of political compromise. Both factors might render the language of a normative instrument unspecific; this, in turn, requires appropriate interpretation, information sharing, consultation and cooperation. In the absence thereof, the risk of normative fragmentation and legal uncertainty due to diverging interpretation and implementation may increase, ultimately outweighing the benefits of non-legally binding instruments such as the LTS Guidelines.

5. CONCLUSION

As has been shown above, non-legally binding instruments have doubtlessly been a quantitative success in space law development: they are numerous and of importance especially in the absence of new treaty law. However, are they also successful – are they effective? The continuing trend of developing space law through non-legally binding norms of responsible behaviour can be described as an alternative method to keep up with the evolving nature of space activities in absence of new treaty law. The key question, however, is whether this approach satisfies the requirements of legal certainty, providing for adequate normative tools affording the required regulatory protection for the continued use and exploration of outer space. Can the implementation of non-legally binding norms at national level,

⁶⁹ ‘The Committee encouraged States and international intergovernmental organizations to voluntarily take measures to ensure that the guidelines were implemented to the greatest extent feasible and practicable’, para. 6, A/AC.105/L.318/Add.6; similar conditional phrasing ‘greatest extent feasible and as soon as practicable’ is used in Article IV(3) of the Registration Convention, this has been viewed as a ‘soft obligation’ albeit in a binding treaty, see e.g. Steven Freeland, *For Better or for Worse? The Use of ‘Soft Law’ Within the International Legal Regulation of Outer Space*, XXXVI *Annals of Air and Space Law* 409, 432 (2011).

⁷⁰ Also reflected in the preparation for the LTS Guidelines, in which each of the four Expert Groups looked at sustainability from different angles.

⁷¹ See e.g. *The United Kingdom’s Implementation of the First Set of Guidelines on the Long Term Sustainability of Outer Space Activities* A/AC.105/C.1/2017/CRP.21 (27 Jan. 2017); or *General presentation of French activities and views for the long-term sustainability of outer space, in relation with the implementation of the first set of guidelines* A/AC.105/C.1/2017/CRP.26 (A/71/20, Annex) (3 Feb. 2017).

including their transformation into legal obligations, ever adequately manage the expectations of space actors, or do the risks of doing so ultimately outweigh the benefits?

The question of whether legal norms are preferable over non-legally binding norms in the development of space law is thereby a wrong angle of approach. Soft space law is a fact by now: the 'era of guidelines' has long begun. Consequently, it may not be enough to call for top-down legal norm-making in order to enhance behavioural consistency and to mitigate regulatory fragmentation. Instead, the focus of legal debate and scrutiny should be put on two crucial aspects of non-legally binding instruments: (1) their effectiveness and (2) their relation with law. Not the very existence of soft law threatens to negatively affect legal certainty; it is rather the ignorance, or misperception, of its role, essence and effect.

In this vein, the key question to be asked is: How can non-legally binding instruments ultimately be effective in successfully steering behaviour? This is, obviously, a question of implementation. While it took ten years⁷² to negotiate and eventually adopt the LTS Guidelines – a success acclaimed with standing ovations at COPUOS – putting those guidelines to the test of effectiveness will require a multifaceted, long-term process including political acknowledgement, governmental engagement, international cooperation, legislative action and eventually legal enforcement. This process must not increase uncertainty for space actors, but it will have to manage expectations in a clear, predictable and reliable way. It will evidently blur the line between legally binding and non-legally binding norms: a compellingly logic consequence of developing space law 'through the backdoor'.

⁷² UN OOSA, *Long-term Sustainability of Outer Space Activities*, <http://www.unoosa.org/oosa/en/our-work/topics/long-term-sustainability-of-outer-space-activities.html> (accessed on 27 July 2019).